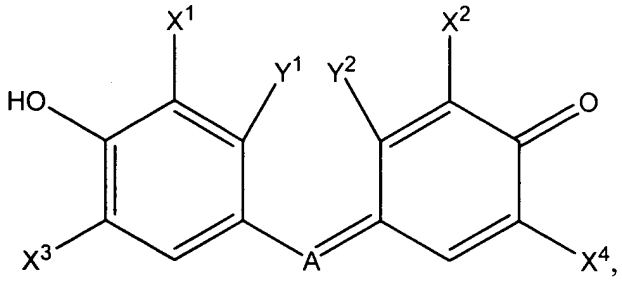
WHAT IS CLAIMED IS:

1. A compound having the structure:




wherein:

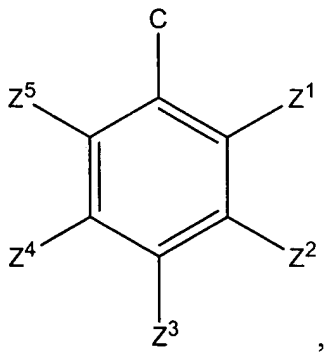
$X^1$ and $X^2$ are each independently H, Me, F, Cl, Br, I, $SO_3H$, $CO_2H$, $CONH_2$, $CONMe_2$, CN, or $NO_2$;

$X^3$ is $NHCH_2R$, or $NHSO_2R$, wherein R is $CH_2COOH$, $CH_2CH_2NG^1G^2$, substituted 2-hydroxyphenyl, or a five or six-membered heterocyclic ring, $G^1$ and $G^2$ are H, Me, Et, $CH_2CH_2OH$, or together are $-(CH_2)_4-$, $-(CH_2)_5-$, $-CH_2CH_2OCH_2CH_2-$, or $-CH_2CH_2NHCH_2CH_2-$;

$X^4$ is H, Me, F, Cl, Br, I, $SO_3H$, $CO_2H$, CN, OMe, $NHCH_2R$, or $NHSO_2R$, wherein R is as defined above,

$Y^1$ and $Y^2$ are each independently H, or taken together are -O-, -S-, -Se-, $-CMe_2-$,-NH-, -NMe-, or -NPh-;

A is N, CH, C-CN, $C-CF_3$, $C-CH_2CH_2COOH$, C-CH=CHCOOH, or




,

wherein:

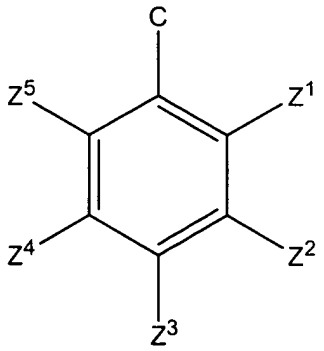
$Z^1$ is H, $CO_2H$, or $SO_3H$;

$Z^2$ and $Z^5$ are each independently H, F, or Cl;

$Z^3$ and $Z^4$ are independently H, F, Cl, $CO_2H$, $NO_2$, $NH_2$, NCS, $NHCOCH_2I$, $SCH_2COOH$, $SCH_2CH_2NH_2$, (N-succinimidyl)oxycarbonyl, (N-succinimidyl)oxycarbonylmethylthio, N-maleimidyl, 3,5-dichloro-2,4,6-triazinylamino, CONHQ, or $SO_2NHQ$, wherein Q is H, $C_1$-$C_{20}$ alkyl, $(CH_2)_mCOOH$, $(CH_2)_nNH_2$, or $(CH_2CH_2O)_kCH_2CH_2NH_2$, wherein m is 1 to about 11, n is 2 to about 12, and k is 1 to about 3

or tautomers and physiologically acceptable salts thereof.

2. The compound of claim 1, wherein A is




wherein:

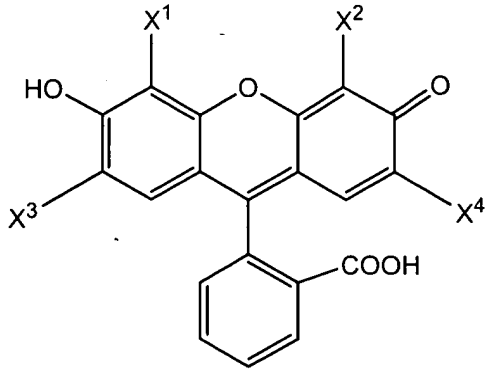
$Z^1$ is H, $CO_2H$, or $SO_3H$;

$Z^2$ and $Z^5$ are each independently H, F, or Cl;

$Z^3$ and $Z^4$ are independently H, F, Cl, $CO_2H$, $NO_2$, $NH_2$, NCS, $NHCOCH_2I$, $SCH_2COOH$, $SCH_2CH_2NH_2$, (N-succinimidyl)oxycarbonyl, (N-succinimidyl)oxycarbonylmethylthio, N-maleimidyl, 3,5-dichloro-2,4,6-triazinylamino, CONHQ, or $SO_2NHQ$, wherein Q is H, $C_1$-$C_{20}$ alkyl, $(CH_2)_mCOOH$, $(CH_2)_nNH_2$, or $(CH_2CH_2O)_kCH_2CH_2NH_2$, wherein m is 1 to about 11, n is 2 to about 12, and k is 1 to about 3

3. The compound of claim 3, wherein $Z^1$ is $CO_2H$, and $Z^2$, $Z^3$, $Z^4$, and $Z^5$ are each independently H.

4. A compound having the structure:



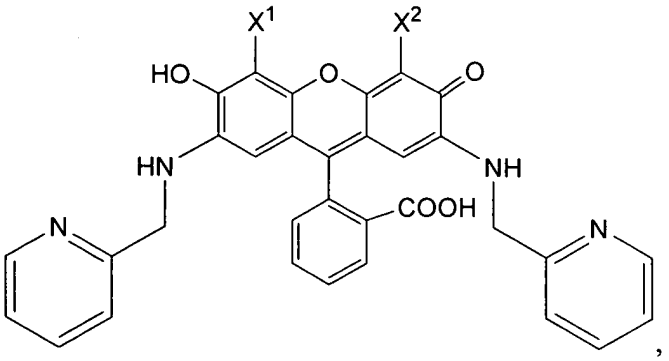

wherein:

$X^1$ and $X^2$ are each independently H, Me, F, Cl, Br, I, $SO_3H$, $CO_2H$, $CONH_2$, $CONMe_2$, CN, or $NO_2$; and

$X^3$ and $X^4$ are $NHCH_2R$ or $NHSO_2R$, wherein R is $CH_2COOH$, $CH_2CH_2NG^1G^2$, substituted 2-hydroxyphenyl, or a five or six-membered heterocyclic ring, $G^1$ and $G^2$ are H, Me, Et, $CH_2CH_2OH$, or together are $-(CH_2)_4-$, $-(CH_2)_5-$, $-CH_2CH_2OCH_2CH_2-$, or $-CH_2CH_2NHCH_2CH_2-$.

5. The compound of claim 4, wherein $X^3$ and $X^4$ are each independently $NHSO_2R$, wherein R is $CH_2COOH$, $CH_2CH_2NG^1G^2$, substituted 2-hydroxyphenyl, or a five or six-membered heterocyclic ring, and wherein $G^1$ and $G^2$ are H, Me, Et, $CH_2CH_2OH$, or $G^1$ and $G^2$ taken together are $-(CH_2)_4-$, $-(CH_2)_5-$, $-CH_2CH_2OCH_2CH_2-$, or $-CH_2CH_2NHCH_2CH_2-$.

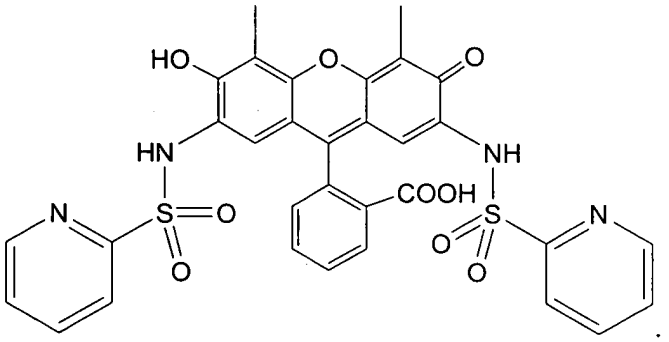
6. The compound of claim 4 having the structure



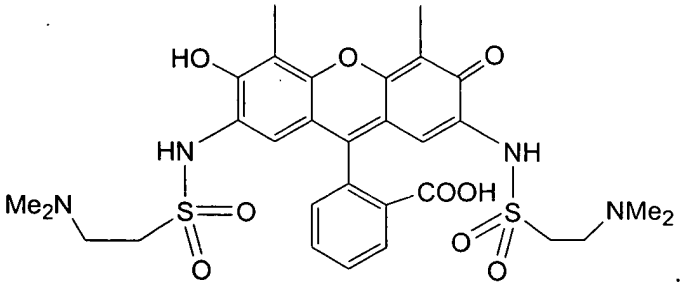
wherein:

$X^1$ and $X^2$ are each independently Me or Cl.

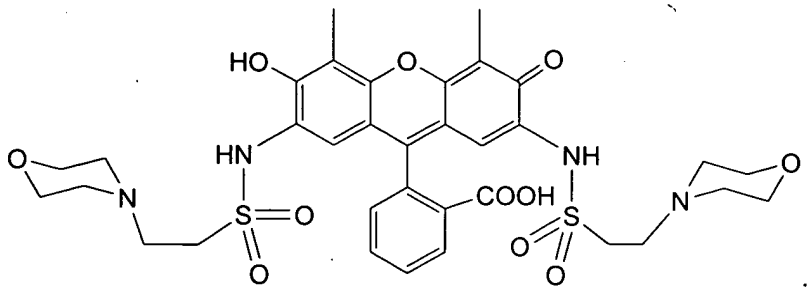
7. The compound of claim 5 having the structure



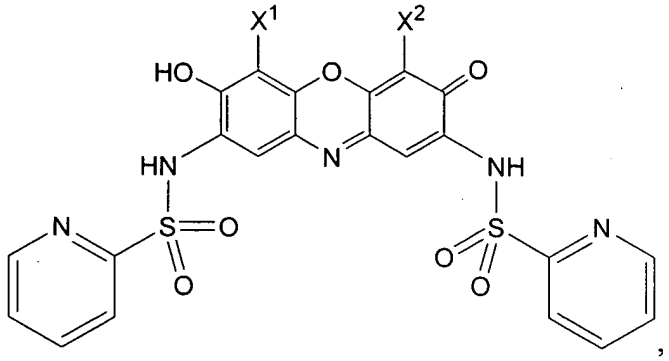
8. The compound of claim 5 having the structure



9. The compound of claim 5 having the structure



10. The compound of claim 1 having the structure



wherein $X^1$ and $X^2$ are each independently H or Me.

11. The compound of claim 1, wherein the compound reacts with a target sequence in the presence of $Zn^{2+}$ ion to generate a detectable signal.

12. The compound of claim 1, wherein the compound reacts with a target sequence in the presence of $Zn^{2+}$ ion to generate a fluorescent signal.

13. The compound of claim 12, wherein the target sequence is a histidine-rich peptide sequence.

14. The compound of claim 13, wherein the histidine-rich peptide sequence comprises about 6 histidine residues.

15. The compound of claim 1, wherein the compound is capable of traversing a biological membrane.

16. A kit comprising a compound of claim 1, wherein in the presence of $Zn^{2+}$ ion, the compound is capable of binding to a target sequence in a recombinant fusion protein; and a binding partner comprising a target sequence, the target sequence comprising a histidine-rich peptide sequence.

17. The kit of claim 16, wherein the target sequence comprises about 6 histidine residues.

18. The kit of claim 16, wherein the compound reacts with the target sequence in the presence of $Zn^{2+}$ ion to generate a detectable signal.

19. The kit of claim 18, wherein the detectable signal is a fluorescent signal.

20. A complex comprising

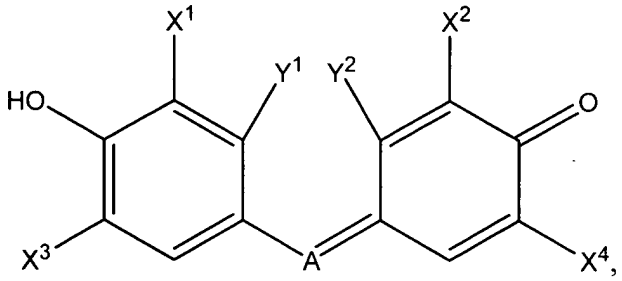
a. a compound of claim 1;

b. a targeting sequence comprising a histidine-rich peptide sequence; and

c. $Zn^{2+}$ ion.

21. The complex of claim 20, wherein the histidine-rich peptide sequence comprises about 6 histidine residues.

22. A method of labeling a histidine-rich protein, comprising providing a fusion protein comprising a native protein and a targeting sequence, and contacting the fusion protein in the presence of an effective amount of $Zn^{2+}$ ion with a compound having the structure:




wherein:

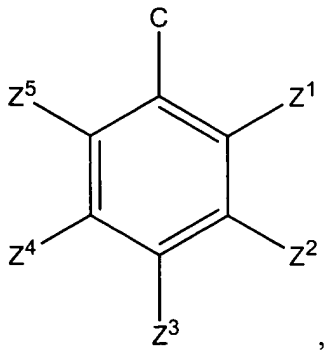
$X^1$ and $X^2$ are each independently H, Me, F, Cl, Br, I, $SO_3H$, $CO_2H$, $CONH_2$, $CONMe_2$, CN, or $NO_2$;

$X^3$ is $NHCH_2R$, or $NHSO_2R$, wherein R is $CH_2COOH$, $CH_2CH_2NG^1G^2$, substituted 2-hydroxyphenyl, or a five or six-membered heterocyclic ring, $G^1$ and $G^2$ are H, Me, Et, $CH_2CH_2OH$, or together are $-(CH_2)_4-$, $-(CH_2)_5-$, $-CH_2CH_2OCH_2CH_2-$, or $-CH_2CH_2NHCH_2CH_2-$;

$X^4$ is H, Me, F, Cl, Br, I, $SO_3H$, $CO_2H$, CN, OMe, $NHCH_2R$, or $NHSO_2R$, wherein R is as defined above,

$Y^1$ and $Y^2$ are each independently H, or taken together are -O-, -S-, -Se-, $-CMe_2-$,-NH-, -NMe-, or -NPh-;

A is N, CH, C-CN, $C-CF_3$, $C-CH_2CH_2COOH$, C-CH=CHCOOH, or




,

wherein:

$Z^1$ is H, $CO_2H$, or $SO_3H$;

$Z^2$ and $Z^5$ are each independently H, F, or Cl;

$Z^3$ and $Z^4$ are independently H, F, Cl, $CO_2H$, $NO_2$, $NH_2$, NCS, $NHCOCH_2I$, $SCH_2COOH$, $SCH_2CH_2NH_2$, (N-succinimidyl)oxycarbonyl, (N-succinimidyl)oxycarbonylmethylthio, N-maleimidyl, 3,5-dichloro-2,4,6-triazinylamino, CONHQ, or $SO_2NHQ$, wherein Q is H, $C_1$-$C_{20}$ alkyl, $(CH_2)_mCOOH$, $(CH_2)_nNH_2$, or $(CH_2CH_2O)_kCH_2CH_2NH_2$, wherein m is 1 to about 11, n is 2 to about 12, and k is 1 to about 3,

or tautomers and physiologically acceptable salts thereof,

thereby labeling a histidine-rich protein.

23. The method of claim 22, wherein the targeting sequence is a histidine-rich peptide sequence.

24. The method of claim 23, wherein the histidine-rich peptide sequence comprises about 6 histidine residues.

25. The method of claim 22, wherein the compound generates a detectable signal.

26. The method of claim 25, wherein the signal is a fluorescent signal.

27. The compound of claim 5 having the structure: